

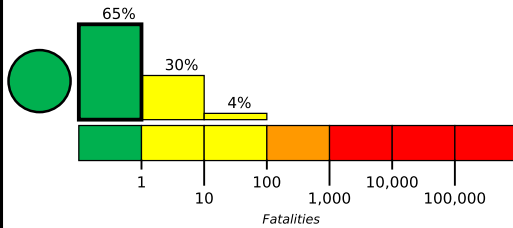
M 6.0, 9km N of Canoas, Costa Rica

Origin Time: 2019-05-12 19:24:50 UTC (Sun 13:24:50 local)
Location: 8.6227° N 82.8326° W Depth: 19.0 km

PAGER
Version 5

Created: 3 weeks, 6 days after earthquake

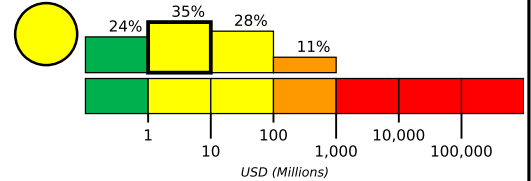
Estimated Fatalities



Yellow alert for economic losses. Some damage is possible and the impact should be relatively localized. Estimated economic losses are less than 1% of GDP of Panama. Past events with this alert level have required a local or regional level response.

Green alert for shaking-related fatalities. There is a low likelihood of casualties.

Estimated Economic Losses

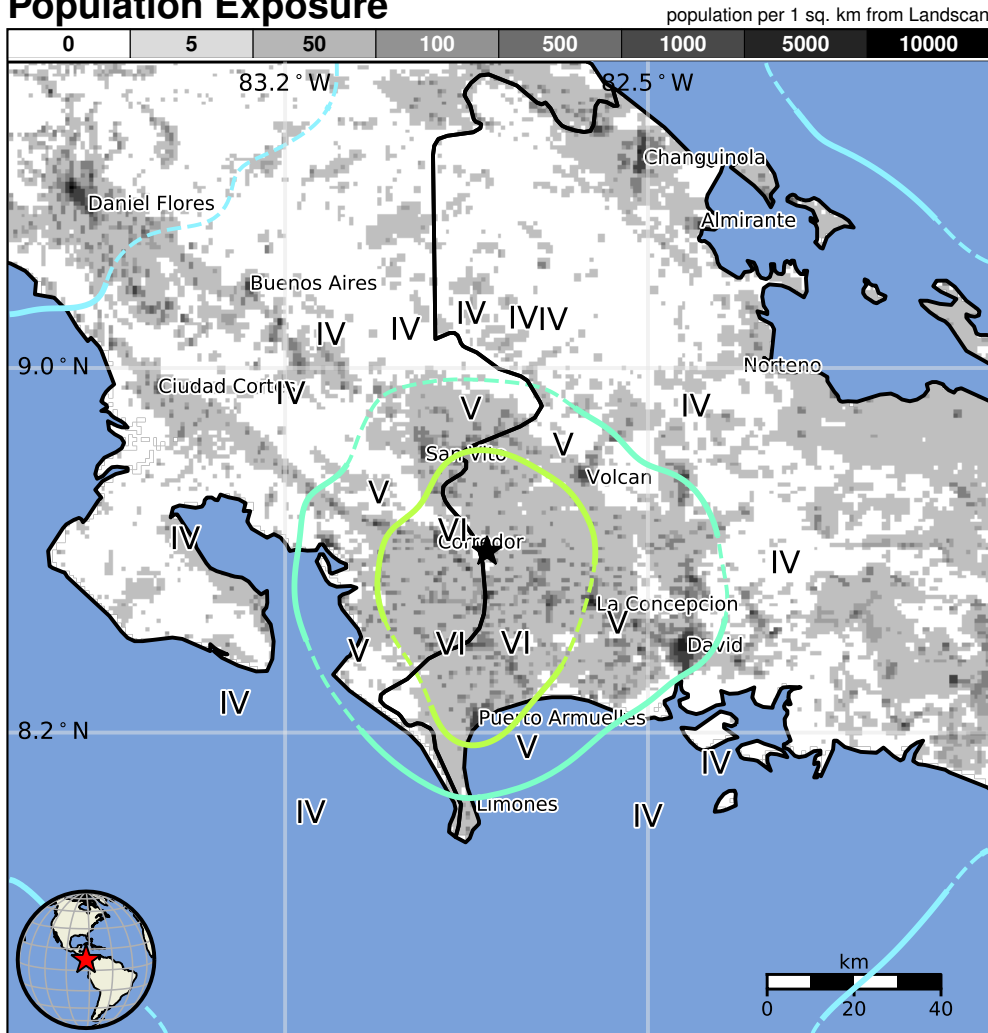


Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k=x1000)	—*	137k*	427k	349k	186k	6k	0	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+
PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	Resistant Structures	None	None	None	V. Light	Light	Moderate	Mod./Heavy	Heavy
	Vulnerable Structures	None	None	None	Light	Moderate	Mod./Heavy	Heavy	V. Heavy

*Estimated exposure only includes population within the map area.

Population Exposure



Structures

Overall, the population in this region resides in structures that are a mix of vulnerable and earthquake resistant construction. The predominant vulnerable building types are unreinforced brick masonry and adobe block construction.

Historical Earthquakes

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
1993-07-10	158	5.8	VII(45k)	1
1990-12-22	215	5.9	VIII(188k)	1
1991-04-22	119	7.6	VII(213k)	75

Recent earthquakes in this area have caused secondary hazards such as landslides and liquefaction that might have contributed to losses.

Selected City Exposure

from GeoNames.org

MMI	City	Population
VII	Puerto Armuelles	19k
VI	Canoas	5k
VI	Brenon	<1k
VI	Santa Cruz	<1k
VI	San Andres	1k
VI	Aserrio de Gariche	2k
V	La Concepción	17k
V	David	83k
IV	Changuinola	23k
IV	Bocas del Toro	13k
III	San Isidro	35k

PAGER content is automatically generated, and only considers losses due to structural damage. Limitations of input data, shaking estimates, and loss models may add uncertainty.
<https://earthquake.usgs.gov/earthquakes/eventpage/us70003k3p#pager>

bold cities appear on map.

(k = x1000)

Event ID: us70003k3p